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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,750	11/30/2001	Akira Kato	Q67505	4885

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EXAMINER	
CONTEE, JOY KIMBERLY	
ART UNIT	**PAPER NUMBER**
2686	5

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/996,750	KATO, AKIRA	
	Examiner	Art Unit	
	Joy K Contee	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 3-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 3-9 is/are rejected.

7)☐ Claim(s) ____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 8, 2004 have been fully considered but they are not persuasive.

Applicant argues that Weisshaar et al. (6,580,916) and Ben-Shachar et al. (6,209,018) describe an arrangement where service manager exports registered service objects but do not disclose or suggest deciding which service object is to be exported based on frequency of use of service and/or importance of service. Examiner disagrees. Ben-Shachar et al. teaches wherein at least one service object, i.e., worker object, is allocated based on at least one selected from necessity (how many workers are needed), importance(high, medium or low priority) and frequency in use (has the worker been reallocated to the same client) (see Ben-Shachar col. 13,lines 45-59 and col. 14,lines 24-44 and col. 26, 51-55).

Applicant also argues that Wiesshaar, nor Ben-Shachar disclose eror-retry or error-recovery; however, these limitations are not claimed. Nonetheless, Ben-Shachar does specifically disclose such fault tolerant features (see col. 10,lines 12).

Hence Examiner has maintained the foundation of the rejections from the previous office action (see below).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 4,5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Weisshaar et al. ("Weisshaar"), U.S. Patent No. 6,580,916.

Regarding claim 4, Weisshaar discloses a service searching system that searches for a service in a distributed system wherein a range of services are distributed in a network, comprising:

a wireless server device (i.e., server **102** coupled to regional node **104**, e.g., server-side or backend portion)connected to the network and implementing a master search service (i.e., provides remote look-up service backend) (col. 6, lines 11-33 and col. 9,lines 27-33 and col. 13, lines 57-59);

a wireless terminal device (i.e., client-side or front-end portion, e.g., the proxy) implementing a slave search service (i.e., remote look-up service front-end), being capable of communicating with the server [by wireless], and being capable of utilizing the master search service, wherein:

the wireless terminal device includes storage means (i.e., service framework service registry **250**) for caching at least one service object obtained through the master search service (col. 14, lines 12-13 and 29-53);

in the case of searching for the service through the slave search service, the wireless terminal device begins by searching the at least one service object cached in the storage means (col. 14, lines 40-50;

in the case of failing to detect the service (e.g., service framework **235** responds to application that service XYZ is not found) in the slave search service (i.e., remote service front-end), the wireless terminal device searches for the service through the master search service (i.e., remote service backend) (col. 21, lines 34-57 and col. 22, lines 50-67);

wherein a wireless communication protocol (e.g.,HTTP, TCP/IP and UDP/IP) between the wireless terminal device and the wireless server device implements a means for assuring communication quality (as is the purpose of any protocol) in a wireless section as a protocol (col. 4, lines 38-46).

Regarding claim 5, Weisshaar further discloses the service searching system as claimed in claim 3. Weisshaar also disclose the additional limitation in claime wherein, when the wireless terminal device searches the wireless server device for the service through the master search service, communication between the wireless terminal device and the wireless server device is executed by being converted into a command and a parameter (e.g., template, see col. 18, line 20-24) in which, inherently, an amount of communication data is reduced (col. 19, lines 25-28).

Regarding claim 7, Weisshaa discloses a wireless server device (i.e., server **102** coupled to regional node **104,** e.g., server-side or backend portion)connected to the network and implementing a master search service (i.e., provides remote look-up service backend) (col. 6, lines 11-33 and col. 9,lines 27-33 and col. 13, lines 57-59);

a wireless terminal device (i.e., client-side or front-end portion, e.g., the proxy) implementing a slave search service (i.e., remote look-up service front-end), being capable of communicating with the server [by wireless], and being capable of utilizing the master search service, wherein:

the wireless terminal device includes storage means (i.e., service framework service registry **250**) for caching at least one service object obtained through the master search service (col. 14, lines 12-13 and 29-53);

in the case of searching for the service through the slave search service, the wireless terminal device begins by searching the at least one service object cached in the storage means (col. 14, lines 40-50;

in the case of failing to detect the service (e.g., service framework **235** responds to application that service XYZ is not found) in the slave search service (i.e., remote service front-end), the wireless terminal device searches for the service through the master search service (i.e., remote service backend) (col. 21, lines 34-57 and col. 22, lines 50-67);

further discloses the service searching system as claimed in claim 1, wherein, when the wireless terminal device searches the wireless server device for the service through the master search service, communication between the wireless terminal

device and the wireless server device is executed by being converted into a command and a parameter (e.g., template, see col. 18, line 20-24) in which, inherently, an amount of communication data is reduced (col. 19, lines 25-28).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. 4Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3,6,8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weisshaar, in view of Ben-Shachar et al. ("Ben-Shachar"), U.S. Patent No. 6,209,018.

Regarding claim 3, Weisshaar discloses a wireless server device (i.e., server **102** coupled to regional node **104,** e.g., server-side or backend portion)connected to the network and implementing a master search service (i.e., provides remote look-up service backend) (col. 6, lines 11-33 and col. 9,lines 27-33 and col. 13, lines 57-59);

a wireless terminal device (i.e., client-side or front-end portion, e.g., the proxy) implementing a slave search service (i.e., remote look-up service front-end), being capable of communicating with the server [by wireless], and being capable of utilizing the master search service, wherein:

the wireless terminal device includes storage means (i.e., service framework service registry **250**) for caching at least one service object obtained through the master search service (col. 14, lines 12-13 and 29-53);

in the case of searching for the service through the slave search service, the wireless terminal device begins by searching the at least one service object cached in the storage means (col. 14, lines 40-50;

in the case of failing to detect the service (e.g., service framework **235** responds to application that service XYZ is not found) in the slave search service (i.e., remote service front-end), the wireless terminal device searches for the service through the master search service (i.e., remote service backend) (col. 21, lines 34-57 and col. 22, lines 50-67).

Weisshaar fails to explicitly disclose the additional limitations here, wherein: priority data corresponding to each of the at least one service object that is to be cached in the wireless terminal device is generated on the basis of at least one selected from necessity, importance and frequency in use of each of the at least one service object in the wireless terminal device; the priority data is related to each of the at least one service object and cached together; and the priority data is updated according to use of the at least one service object.

In a similar field for endeavor, Ben-Shachar discloses a service framework for a distributed object network system including a server, and a pool of workers for a service located on the server, wherein the workers execute service requests (i.e., reads on lookup service) from a client in a distributed object network system (see col. 3, lines 26-

39) priority data corresponding to each of the at least one service object (e.g., worker objects) that is to be cached in the wireless terminal device is generated on the basis of at least one selected from necessity (e.g., increasing order of workload), importance (e.g., workers assigned to work for high priority clients, see col. 26, lines 49-51) and frequency (e.g., how many workers are instantiated), see col. 14 ,lines 29-37) in use of each of the at least one service object in the wireless terminal device (col. 24, lines 1-42);

the priority data is related to each of the at least one service object and cached together (i.e., the client wait queue allocates the prioritized requests and puts them in queue) (col. 26, lines 34-55); and

the priority data is updated (i.e., workers are moved from one queue to another appropriately to priority sub-queues) according to use of the at least one service object (col. 26, 51-55).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include priority based access to requested services for the purpose of ensuring access to system resources as suggested by the functions of the resource manager 239 in Weisshaar (see col. 9,lines 5-10).

Ben-Shachar further discloses when the cached at least one service object overflows in order to cache a new service object in the wireless terminal device, at least one low-priority service object (e.g., number of workers) is deleted on the basis of the priority data (col. 6, lines 29-39 and lines 58-67).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Weisshaar to include priority based access to requested services for the purpose of ensuring access to system resources as suggested by the functions of the resource manager 239 in Weisshaar (see col. 9,lines 5-10).

Regarding claim 6, Weisshaar further discloses the service searching system as claimed in claim 3, respectively, wherein, when the wireless terminal device searches the wireless server device for the service through the master search service, communication between the wireless terminal device and the wireless server device is executed by being converted into a command and a parameter (e.g., template, see col. 18, line 20-24) in which, inherently, an amount of communication data is reduced (col. 19, lines 25-28).

Regarding claims 8 and 9, Weisshaar further discloses the service searching system as claimed in claim 3, respectively, wherein a wireless communication protocol (e.g.,HTTP, TCP/IP and UDP/IP) between the wireless terminal device and the wireless server device implements a means for assuring communication quality (as is the purpose of any protocol) in a wireless section as a protocol (col. 4, lines 38-46).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K. Contee whose telephone number is 703-308-0149. The examiner can normally be reached on alternating Mondays, Tuesdays and Thursdays from 5:30 a.m. to 2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703-305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Joy K. Contee
April 3, 2004

Marsha D Banks-Harold
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